

Introduction

The military is not just the fighting force of the state—it is the mirror of society. The equitable administration of its code of military justice, the impartiality of its merit-based promotion system, and the compassion shown its membership, are the milemarkers of progress in the Armed Forces. When leaders decide to initiate armed hostilities, troop morale becomes the most important operational factor, and that morale is based, in the final analysis, on the evenhandedness and equity of military institutions. And that evenhandedness is undermined by the artificial exclusion of women from jobs that they are capable of performing. Those restrictions erode internal confidence and the operational edge necessary to prevail against a worthy opponent.

Just as the nature of warfare and the warfighter have evolved through advances in technique, so women have found new avenues toward leadership in today's military through technology in general and through information technology (IT) in particular. The global but American-led information revolution has underwritten the so-called revolution in military and business affairs and invests heavily in the unfettered contributions of women. Their support (particularly in the IT milieu), is vital not to fulfill the agenda of liberal politicians, but to secure victory in future armed struggles. For warfighters, this is the acid test—can females make real contributions in future battles—battles that necessarily leverage advanced technology over traditional forms of combat?

According to Lory Manning, Director of Women in the Military Project, Women's Research and Education Institute, there are approximately 200,000 women in the Armed Forces. But the success of the all-volunteer force demands many more female recruits in the future and their complete integration into all areas of the military for which they can qualify. The reason for increasing our reliance on women is simple: The best ideas and the best warriors are indispensable to win future battles. The need is

Reaching For IT . . .

SERVICEWOMEN ESTABLISH TECHNOLOGICAL BEACHHEAD AGAINST SEXISM

J. Michael Brower

operational; nothing more, nothing less. The talent pool that females enrich must be tapped to marshal victory on the technology-dependent battlefields of the new century.

Helping The Nation

The military can help the nation recruit its most important IT labor pool, our females and our youth, by doing its share to stress the following:

- Technical training for women (particularly math- and science-oriented tech training) and avoiding the need to contract out for complex skills;
- Take a queue from the private sector by realigning work schedules to be more compatible with family needs (recalling the origin of all future recruits);
- Adopt a continuous retraining regime as military needs change in the direction of battlefield digitization and IT generally;
- Provide military programs to attract women into hard-to-fill IT and technical positions; and

- Continue to make college-level studies (i.e., the G.I. Bill) a priority both while serving and after departing the military.

How can women be attracted toward IT jobs in the military? While not the *most important* attraction, compensation (including health and retirement benefits) can be in the military's favor. First, the military offers gender equity in pay that is not the rule today in the private sector. According to the Bureau of Labor Statistics, female programmers earned 81 cents for every dollar male programmers brought home in 1998, and female operations systems analysts made about 80 cents for every dollar their male counterparts made. According to the annual salary survey conducted by the SANS Institute of Colorado Springs, female IT workers received smaller raises than their male counterparts last year—10.2 percent vice 12.1 percent for males. According to the 1999 Network World Salary Survey published in July 1999 (<http://www.nwfusion.com/you>), women are victims of an opportunist noblesse

oblige, the same salary-gender gap that is the rule in almost all occupational groups. Women earned an average of 72 cents for every dollar a male made in the categories of senior network executive, local and wide area network management, and in other network management and network staff positions. According to the Office of Personnel Management, women in IT positions nationwide are still making around \$5,000 a year less than their male counterparts. The private sector will eventually overcome these pay differences, but the Armed Forces can take advantage of the disparity to attract military and civil service females and to an extent reduce its servile dependence on contractors.

Other steps to attract females to IT positions in the military and supporting civil service jobs include recommending the end of legalized restrictions on females for jobs they can perform. Offering special signing bonuses and creating entrepreneurial pay differentials for IT specialties will also help to retain needed female talent. Finally, an all-out assault on sexual harassment in all its genres must be launched, as the best recruitable female IT candidates have been infected by negative press on this issue and are correspondingly leery of military service. These perceptions, however, can only be cleansed when top leadership endorses the concept that the only limits on servicemembers should be their ability to handle a given task, regardless of their gender.

What The Future Holds

No one should retain the impression that women are somehow estranged from computers and the associated technologies. Nothing of the kind! Females have made important historical strides in computer development. For example, a woman wrote the first computer program (Ada Lovelace, writing about Charles Babbage's analytical engine in 1843). In her honor, DOD named its software programming language Ada, and that language remains a giant in the Defense industry's automated information system community, the second most commonly

used language after Cobol. During World War II, the code-breaking Enigma machine, used to crack the German's encoded messages to sea commanders intercepting cargo bound for besieged Britain, was often operated by women. Also during the war, though males get most of the credit (the writers of *his-story* defeating history), six women programmed the world's first "computer" built in 1945, ENIAC (Electrical Numerical Integrator and Computer). (Find out more about them at the Women in Technology International (WITI) Foundation Web site at www.witi.org.) Today, women like the Air Force's highest ranking female LTG Leslie F. Kenne, commanding the Air Force Materiel Command's Electronic Systems Center at Hanscom Air Force Base, MA, exemplify the importance of integrating females into the military and into IT jobs as keys to winning wars.

Early in 1999, the U.S. Census Bureau indicated in its *Statistical Abstract of the United States* that IT is the work sector in which women are building their future. There are already 5.6 million more women in IT-related occupations than men, more of them on the upper end of the pay scale than the lower. With the IT and information-related job sectors now making up 55 percent of the U.S. employment picture and knowledge workers bringing home 64 percent of the available "bacon," women are uniquely prepositioned to make remarkable social as well as economic advancements. In addition, according to the Census Bureau, more women are attending college than men (70 percent of women, 64 percent of male 1997 high school graduates). Also, the Internet Advertising Bureau predicted that almost half of the online population would be female in 2000. The U.S. military ignores these trends to its detriment. The paradigm that features women in a central role in IT gives them a closer position to center stage in a military that must master IT to be fully effective.

A Laptop In Every Knapsack!

IT has a natural partner in the feminine ascendancy reflected in western

society and its armed forces since the end of World War I. Western industrial society is pushing the sinews of production further to the east and south, morphing into technocracy before our eyes. Victory in the field, while occasionally encumbered by the bugs embedded in the fruits of IT, cannot be had without the most complex of machinery. Increasingly, women will be the ones who volunteer military units will seek to fight with, and women will be the ones relied on to maintain and manage IT systems. With the end of "front lines," defeated by rapidly advancing technology, sexism in all forms must be abandoned by the victorious militaries of the new millennium. And yet, instead of riding and harnessing the wave, many leaders in and around the military wish to oppose the irresistible alterations demanded by technology-driven changes. To many traditionalist warfighters, the most unpalatable and operationally risky changes concern the female-at-arms. They deny or are blind to the fact that technology is advancing and has redefined the rules of battlespace and paves the way for women to assume leading roles. The fact remains that tomorrow's victories in technology-rich conflicts will be won with women in the vanguard, or they may not be won at all.

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